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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/708,016	02/03/2004	CHIEN-SHENG YANG	12030-US-PA	2015
31561	7590	06/27/2005	EXAMINER	
JIANQ CHYUN INTELLECTUAL PROPERTY OFFICE 7 FLOOR-1, NO. 100 ROOSEVELT ROAD, SECTION 2 TAIPEI, 100 TAIWAN			SCHECHTER, ANDREW M	
			ART UNIT	PAPER NUMBER
			2871	

DATE MAILED: 06/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

AK

Office Action Summary	Application No.	Applicant(s)	
	10/708,016	YANG, CHIEN-SHENG	
	Examiner	Art Unit	
	Andrew Schechter	2871	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 June 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) 4,5,8,10,11 and 13-25 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 12 is/are rejected.
- 7) ☒ Claim(s) 6,7 and 9 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>2/3/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Objections

2. Claim 6 is objected to because of the following informalities: "disposed between the capacitor electrode and the pixel electrode" should be "with the capacitor electrode disposed between the transparent capacitor electrode and the pixel electrode". From claim 1, we know that the pixel electrode and the capacitor electrode form a pixel storage capacitor, so in Fig. 5, for instance, the pixel electrode [570] is next to the capacitor electrode [540b] which is next to the transparent capacitor electrode [540a]. Appropriate correction is required.
3. Claim 7 is objected to because of the following informalities: "the active element is directly electrically coupled to the capacitor electrode or the transparent capacitor electrode" should be "the active element is directly electrically coupled to the transparent capacitor electrode", as shown in Fig. 5 (the capacitor electrode is not electrically coupled to the active element). Appropriate correction is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by *Matsushima*, U.S. Patent No. 5,917,563.

Matsushima discloses [see Figs. 2 and 4, for instance] a pixel structure, adapted to be disposed on a substrate [10], comprising a scan line [16], a data line [20], an active element, disposed near an intersection of the scan and data line, electrically coupled to the scan and data line; a capacitor electrode [26a]; a pixel electrode [25] disposed over the capacitor electrode and electrically coupled to the active element, wherein the pixel electrode and the capacitor electrode form a pixel storage capacitor; and an electrical field shielding layer [the part of 26a between the data line and the pixel electrode] disposed between the data line and the pixel electrode. Claim 1 is therefore anticipated.

6. Claims 1 and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by *Zhang et al.*, U.S. Patent No. 6,115,088.

Zhang discloses [see Fig. 10, for instance] a pixel structure, adapted to be disposed on a substrate, comprising a scan line [104], a data line [105], an active element, disposed near an intersection of the scan and data line, electrically coupled to the scan and data line; a capacitor electrode [106]; a pixel electrode [107] disposed over

the capacitor electrode and electrically coupled to the active element, wherein the pixel electrode and the capacitor electrode form a pixel storage capacitor; and an electrical field shielding layer [the part of 106 between the data line and the pixel electrode] disposed between the data line and the pixel electrode. Claim 1 is therefore anticipated.

Zhang also discloses that the capacitor electrode, and the electrical field shielding layer, and the pixel electrode are made from ITO [col. 3, lines 31-48], so claim 12 is also anticipated.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Matsushima*, U.S. Patent No. 5,917,563 as applied above, in view of *Takahara et al.*, U.S. Patent No. 5,673,127.

Matsushima discloses the active element comprising a polysilicon [11] thin film transistor, but not necessarily that it is a low temperature polysilicon TFT. *Takahara* discloses using a low-temperature polysilicon TFT, and teaches that it is preferred (over high-T polysilicon) because "a drive circuit can be built in and the display panel can be made at a low price" [col. 19, lines 48-55]. It would have been obvious to one of

ordinary skill in the art at the time of the invention to do so in the device of *Matsushima*, motivated by this teaching. Claim 2 is therefore unpatentable.

Matsushima discloses a drain/source conductive layer [20a, 21a, etc.] wherein the active element is electrically coupled to the data line and the pixel electrode through the drain/source conductive layer, so claim 3 is also unpatentable.

Allowable Subject Matter

9. Claims 6, 7, and 9 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

10. The following is a statement of reasons for the indication of allowable subject matter:

The prior art does not disclose the device of claim 6, in particular the additional limitation that there is also a transparent capacitor electrode, in addition to the capacitor electrode (a separate element which is itself transparent) arranged as recited (see above objection) to form the pixel storage capacitor. Claim 6 would therefore be allowable if rewritten appropriately, as would claims 7 and 9 which depend from it.

Note, however, the objection to claims 6 and 7 above.

If claim 6 were so rewritten, claim 8 (now withdrawn) could be rejoined as a claim depending on an allowable generic claim. However, claim 8 would be objected to since "wherein the active element is electrically coupled to the capacitor or the transparent capacitor electrode through the pixel electrode" should presumably be "wherein the

transparent capacitor electrode is electrically coupled to the active element through the pixel electrode" (as shown in Fig. 6, for instance).

Election/Restrictions

11. Applicant's election without traverse of Group I, species A1, B1, and C1 in the reply filed on 16 June 2005 is acknowledged.

Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew Schechter whose telephone number is (571) 272-2302. The examiner can normally be reached on Monday - Friday, 9:00 - 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert H. Kim can be reached on (571) 272-2293. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Art Unit: 2871

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Andrew Schechter
Primary Examiner
Technology Center 2800
21 June 2005